

10/9/2006

Patent Claims

JAP20 Rec'd FOTRPTO 30 MAR 2006

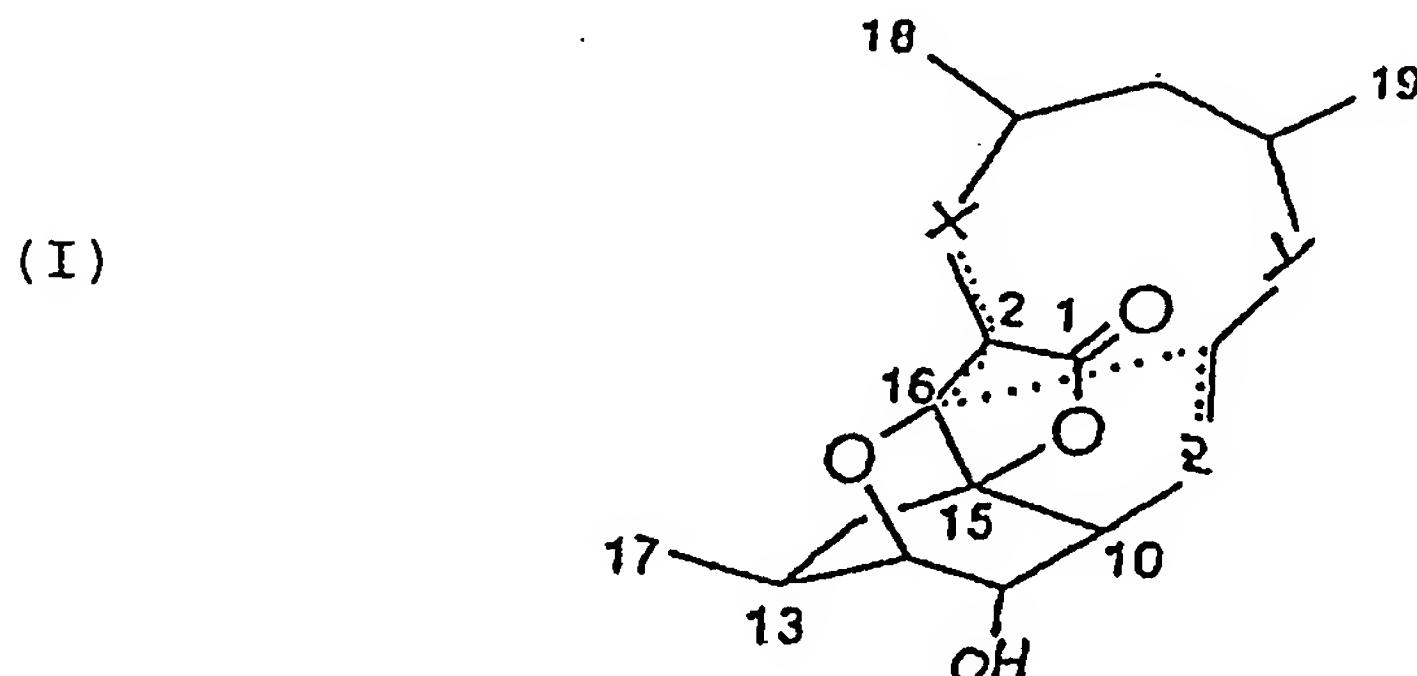
1. A substance, characterized in that it is a polycyclic macrolactone and can be produced by a representative of the bacterial genus *Verrucosispora*.

2. A substance as claimed in claim 1, characterized in that it exhibits a pharmacological effect, in particular an antibiotic effect.

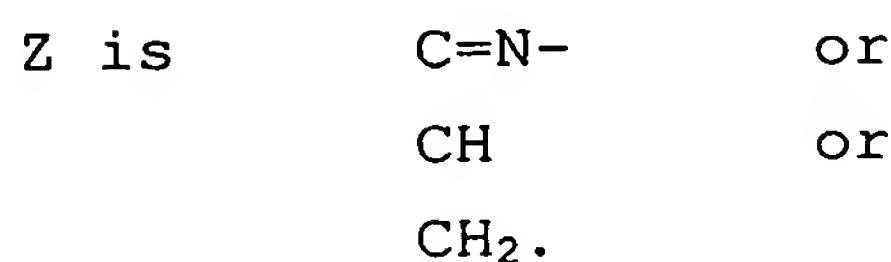
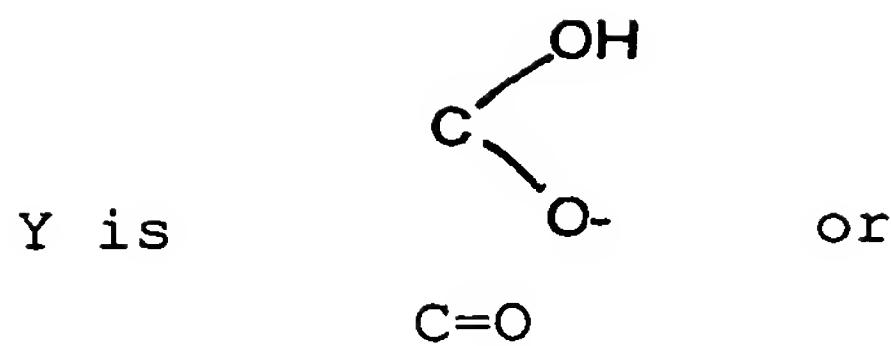
3. A substance as claimed in claim 1 or claim 2, characterized in that it exhibits an antibiotic effect towards Gram-positive bacteria.

4. A substance as claimed in one of the preceding claims, characterized in that the representative of the bacterial genus *Verrucosispora* is the bacterial strain AB 18-032 (DSM 15899).

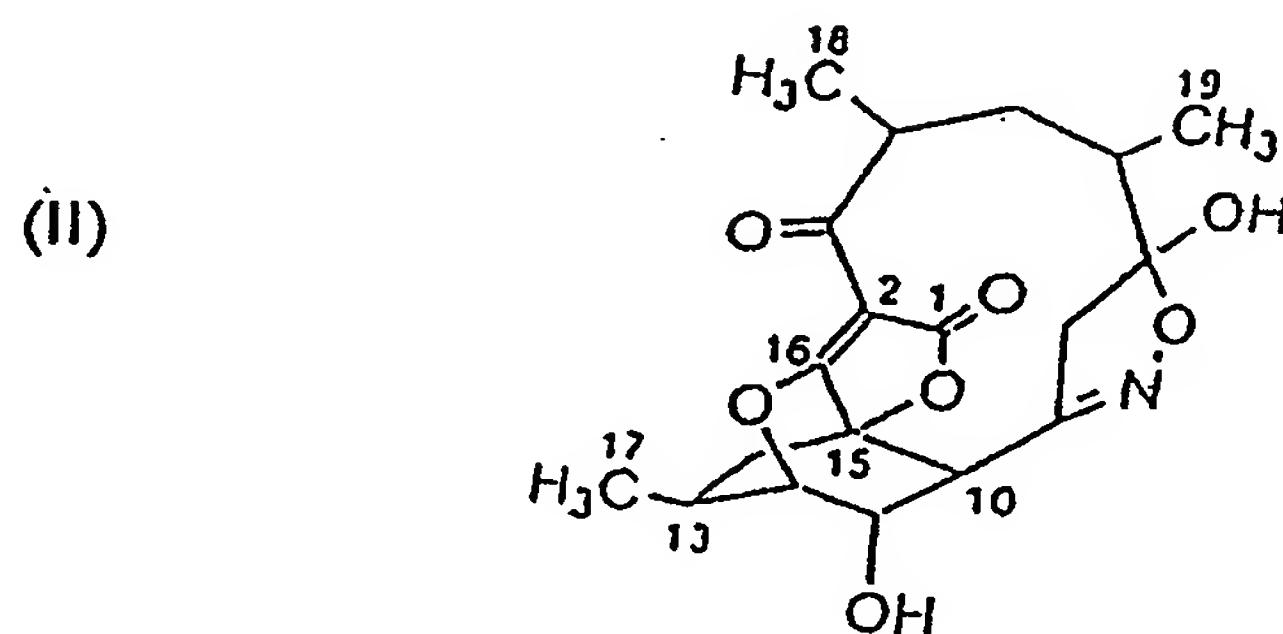
5. A substance, in particular as claimed in one of claims 1 to 4, characterized by the general Formula I together with all the possible relative configurations



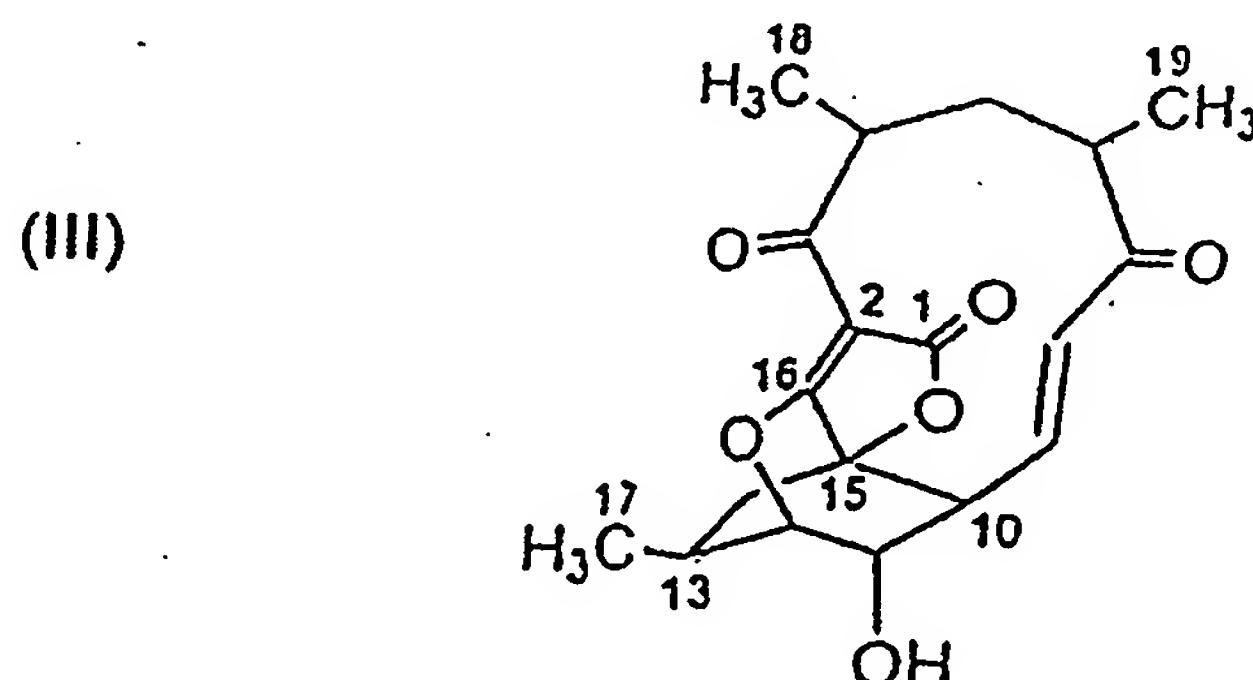
where X is C=O or
C-OH



6. A substance as claimed in claim 5, characterized by the Formula II together with all the possible relative configurations

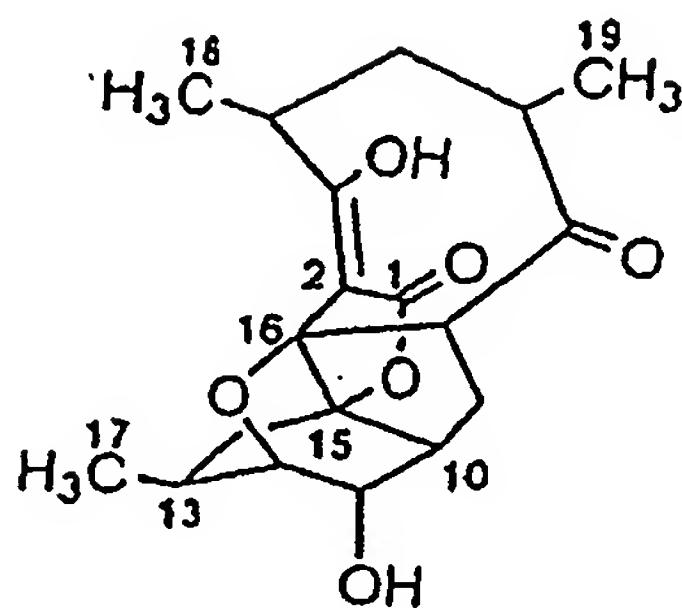


7. A substance as claimed in claim 5, characterized by the Formula III together with all the possible relative configurations



8. A substance as claimed in claim 5, characterized by the Formula IV together with all the possible relative configurations

(IV)



9. A substance, in particular as claimed in one of the preceding claims, characterized in that it inhibits the synthesis of para-aminobenzoic acid, in particular the synthesis of para-aminobenzoic acid from chorismic acid.

10. A substance, in particular as claimed in one of the preceding claims, characterized in that it is a polycyclic macrolactone and, as constituent structures, exhibits at least one oxabicyclo system and at least one Michael system as double bond system.

11. A substance, characterized in that it is a derivative of a polycyclic macrolactone as claimed in one of the preceding claims.

12. A pharmaceutical composition, characterized in that it comprises at least one substance as claimed in one of the preceding claims and at least one pharmaceutically acceptable excipient.

13. A pharmaceutical composition, characterized in that it comprises at least one substance which inhibits the

synthesis of para-aminobenzoic acid from chorismic acid and at least one pharmaceutically acceptable excipient.

14. The use of a substance as claimed in one of claims 1 to 11 for treating infectious diseases which are at least concomitantly influenced by bacteria and/or protozoa.

15. The use of a substance as claimed in one of claims 1 to 11 for producing a drug for treating infectious diseases which are at least concomitantly influenced by bacteria and/or protozoa.

16. The use of a substance for treating infectious diseases which are at least concomitantly influenced by bacteria and/or protozoa, characterized in that the substance inhibits the synthesis of para-aminobenzoic acid from chorismic acid.

17. The use of a substance for producing a drug for treating infectious diseases which are at least concomitantly influenced by bacteria and/or protozoa, characterized in that the substance inhibits the synthesis of para-aminobenzoic acid from chorismic acid.

18. The use as claimed in claim 16 or claim 17, characterized in that at least one substance as claimed in one of claims 1 to 11 is employed.

19. The use as claimed in one of claims 14 to 18, characterized in that at least some of the bacteria are Gram-positive bacteria.

20. The use as claimed in one of claims 14 to 19, characterized in that the bacteria and/or protozoa are resistant, in particular multiresistant, to conventional antibiotics.

21. A method for controlling microorganisms, in particular bacteria and/or protozoa, characterized in that use is made of at least one substance as claimed in one of claims 1 to 11.

22. A microorganism, characterized in that it is able to produce at least one substance as claimed in one of claims 1 to 11.

23. A microorganism as claimed in claim 22, characterized in that it is a strain of the bacterial genus *Verrucosispora*, or a mutant thereof.

24. A microorganism, in particular as claimed in claim 22 or claim 23, characterized in that it is the strain AB 18-032 (DSM 15899) of the bacterial genus *Verrucosispora*, or a mutant thereof.

25. A process for preparing at least one substance as claimed in one of claims 1 to 11, comprising the procedural steps of:

- a) culturing a microorganism as claimed in one of claims 22 to 24,
- b) obtaining a culture supernatant from the culture,
- c) where appropriate, preparing a culture filtrate, and
- d) where appropriate, isolating one or more substances from the culture supernatant and/or the culture filtrate.

26. A process for preparing at least one substance as claimed in one of claims 1 to 11, comprising the procedural steps of:

- a) culturing a microorganism as claimed in one of claims 22 to 24,
- b) isolating one or more substances from the microorganism.